

rosoma be cut open and immersed in water, the brown particles that escape diffuse themselves through the fluid, and shine as numerous scintillations, independent of the perfect structure. It is also worthy of remark that general friction or contact is not essential to elicit the perfect light of *Pyrosoma*, since touching one small portion of the body is sufficient to produce a brilliant glow throughout the whole. When first removed from its native element, the broader extremity of this aggregate of molluscs presented a wide and circular orifice, forming nearly a continuous surface with the central tube constituting the interior of the body; but when kept in a vessel of sea-water, or much handled, this orifice was closed by the contraction of a smooth, dense membrane at its margin, and which either obliterated the aperture, or left but a minute central orifice; water at the same time being contained in the barrel or tube of the body. Except in the action of this sphincter-like membrane, no motive power was perceptible in the *Pyrosoma*.

“ Fresh water appears to act as a powerful and permanent stimulus on marine *Noctiluca*. Those who have intervals of repose from their phosphorescence immediately emit their light when brought in contact with fresh water, and this fact was very strikingly exhibited in the *Pyrosomata*. When placed in a vessel of sea-water and permitted to remain quiet, these molluscs afforded no light, and when touched, gleamed forth only as long as the irritating cause remained, and then gradually returned to their original state. When, however, the same creatures were placed in a vessel of fresh water, they never ceased glowing with their brightest refulgence until life was extinct, which was not until after the lapse of several hours. When also the same molluscs were mutilated, or so near death as to refuse to emit light upon irritation in sea-water, immersing them in fresh water produced at least a temporary revival of their brightest gleam; indeed I have always felt assured that the contact of fresh water in a darkened room would ever elicit the luminous power of a marine creature, were the latter of a luminous nature.”

At the request of the Chairman the following notes, relating chiefly to the natural history of Ireland, were read by W. Thompson, Esq., V.P., Nat. Hist. Society of Belfast.

Of the species so marked *, specimens were exhibited.

MAMMALIA.

* *Vespertilio Nattereri*, Kuhl. Reddish-grey Bat. I am induced to exhibit a specimen of this bat, which I obtained in July 1835 among the ruins of Harlech Castle, North Wales, it being hitherto only known as British from individuals procured in the east and south-east of England.

* *Mus Hibernicus*. Irish Rat. On questioning a person some years ago respecting a black rat which he had seen in the north of Ireland, my curiosity was excited by the statement that it had a white breast. In autumn last a similar description was given me of one that had

been caught some time before in Tollymore Park, county of Down. Mr. R. Ball, of Dublin, informs me that black rats, with the breast white, have been reported to him as once common about Youghal, county of Cork, though they are now very rare or perhaps extinct. But until April last, when a specimen was sent from Rathfriland, county of Down, to the Belfast Museum, I had not an opportunity either of seeing or examining the animal. This individual differs from the *M. Rattus* as described by authors, and also from specimens preserved in the British Museum, and in the collection of this Society, in the relative proportion of the tail to that of the head and body; in having shorter ears, and in their being better clothed with hair, as is the tail likewise; and in the fur of the body being of a softer texture. The difference in colour between the *M. Rattus* and the present specimen is, that the latter exhibits a somewhat triangular spot of pure white extending about nine lines below the breast, the fore feet being of the same colour.

The following is a comparison of this specimen with the *M. Rattus* as given by Mr. Jenyns. The same dimensions, with the very trivial difference of the ears being half a line less, appear in Mr. Bell's "British Quadrupeds."

	M. Hibernicus.		M. Rattus.
	in. line.		in. line.
Length of the head and body	7 6	..	7 4
———— head	1 10	..	1 10
———— ears	0 9	..	0 11½
———— tail	5 6	..	7 11
———— from the base of the ear to the snout	} 1 6		
———— from the tarsal joint to the end of the toes		} 1 6	

These differences incline me to consider this animal distinct from *M. Rattus*, and being unable to find any species described with which it accords, I propose to name it provisionally *M. Hibernicus*. Should future investigation prove it to be a variety only of *M. Rattus*, it can be so considered under the present appellation.

* *Lepus Cuniculus*, Linn. Rabbit. Persons who take rabbits in the north of Ireland distinguish two kinds, the one they call the *burrow*, the other the *bush* rabbit. The meaning of the former term is obvious, but of the latter it may be stated that the animal is so designated, in consequence of having a "form" like the hare, and which is generally placed in bushes or underwood. The circumstance is noticed at present in connection with a specimen of each kind which I have the pleasure of presenting to the Society.

Cervus Alces, Linn. Elk. A horn of the true elk, *C. Alces*, was some time since presented to the Natural History Society of Belfast, as that of the fossil Irish species, *C. Hibernus*. On inquiry from the donor I learned that it had been given him by a relative residing in Tyrone, and in whose possession it had for a long time been on account of the value attached to it as a relic dug out of a peat-bog on his own property in that county. Further particulars cannot now be ob-

tained, as the gentleman is since deceased, but I have thought it proper to lay the statement as I received it before this Society, with the additional remark that the horn is quite perfect and appears recent; but again, might not this be attributed to the well-known preservative property of the soil in which it is said to have been found? The number of snags upon the horn, and its dimensions show that it belonged to a very old animal: its breadth, measured in a straight line across the centre, without the curve being reckoned, is 35 inches; its height, similarly estimated in a straight line from the base, $26\frac{1}{2}$ inches.

As the elk inhabited a wide range of latitude on the continent of Europe it does not appear singular to me that it should have been a native of Ireland, especially when the *Cervus Hibernus*, a species of greater magnitude, was indigenous to the country. In the *Annales des Sciences Naturelles* for 1835, t. iv. (new series), portions of the horn of the *Cervus Alces* are figured and described by M. Christol, from specimens found in a fossil state at Pézénas.

BIRDS, new to Ireland.

Strix Scops, Temm. Scops-eared Owl. I have been informed by Robert Ball, Esq., of Dublin, that an owl of this species was shot in the month of July a few years ago by the gamekeeper at Loughcrew, county of Meath, the seat of J. W. L. Napier, Esq., in whose possession it now is. The specimen was kindly sent to Dublin for the examination of Mr. Ball, who states in a letter to me that it proved identical with a *Strix Scops* that I have seen in his collection.

Columbus arcticus, Linn. Black-throated Diver. In the collection of Dr. J. D. Marshall, of Belfast, there is a specimen of this bird, which was shot during winter in Larne Lough, county of Antrim. It is in the plumage of the first year.

* *Procellaria Puffinus*, Linn. Cinereous Shearwater. Of this species one individual only has yet been recorded with certainty as British. I have now to notice a second specimen, respecting which Mr. Robert Davis, Jun., of Clonmel, has favoured me with the following particulars. "It was taken in August 1835, by a boy who saw it scrambling towards a hole at the base of a cliff near Dungarvan, county of Waterford. They are called *haydowns* by the fishermen, who say that they breed there and live in holes in the rocks, but are at all times very scarce. The specimen was sent to me alive, and apparently in good health, but it would not eat any thing, and died after having been in my possession for about ten days or a fortnight. It had an extremely rank, fishy, or oily smell at all times, but I never saw any appearance of oil being discharged from its mouth or nostrils. It seemed unable to walk, but scrambled along with its breast about an inch from the ground. Although its wings were perfect and uninjured, it made no attempt to fly, but if let fall from a height dropped heavily to the ground. It showed an inclination to climb, having several times mounted up the handle of a long spade that

rested against the wall of the yard in which it was kept. It did not ramble about, nor care much for water, but when put in a large tub very dexterously pulled itself up by the hooked bill, until the claws got on the edge. When handled, it bit severely."

The specimen now belongs to Mr. W. D. King, of Sudbury, to whom I am indebted for the opportunity of examining it, and also of exhibiting it here. It accords well with Temminck's description of the adult bird.

FISHES.

The first to be described in this class is a new genus of the family *Tanioidea*, for which I propose the name of *Echiodon*. It is founded upon a specimen obtained on the coast of the county of Antrim, by Dr. J. L. Drummond, in June 1836.

ECHIODON.

Head oval; body much elongated, compressed, narrow, lanceolate; snout moderately long; mouth cleft obliquely, both jaws terminated by large cylindrical teeth; no ventral fins, nor scales instead; fin-rays all soft; dorsal and anal fins continued throughout almost the entire length; branchiostegous membrane with seven rays.

Considered relatively to the other *Tanioidea* it agrees with *Trichiurus* and *Stylephorus*, in wanting ventral fins, but not in any other generic character; from the head posteriorly it approaches most nearly to *Cepola*, but in the form of the head and in dentition differs remarkably from all the other genera.

* *Echiodon Drummondii*. Length 11 inches, depth 6 lines, breadth 3 lines, head one-ninth of the whole length, eye occupying the entire upper half of head, teeth numerous and small, except two, which are large and fang-like at each side the extremity of the upper jaw, and one long cylindrical tooth terminating the lower jaw on each side; upper jaw the longer; dorsal, anal, and caudal fins united; body without scales (?); lateral line inconspicuous; vent $1\frac{1}{4}$ inch from point of lower jaw; vertebrae 98.

D. 180? A. 180? P. 16? C. 12?

* *Crenilabrus microstoma*, Couch MS. Small-mouthed Wrasse. In June 1836, Dr. Drummond found a *Crenilabrus*, on the beach at Cairnrough, county of Antrim, which he liberally handed over to me, and appearing to be a new species, I at once drew up a detailed description of it. I now find that the same Wrasse has been met with in Cornwall by Mr. Couch, who likewise considered it as new and sent two specimens to Mr. Yarrell, under the appropriate name of *Cren. microstoma*, a term, though unpublished, which I consider it but fair to adopt, as Mr. Couch had the priority in obtaining the species.

My specimen is about 3 inches long and moderately deep in proportion, its depth being to its length as 1 to $3\frac{1}{2}$. Its most prominent characters are,—mouth small, jaws equal, teeth few in number and

without serratures, a single row in the lower, and two rows in the upper jaw ; scales very large, those of the body concealing the base of the dorsal and anal fins, but none apparent on the fins ; anal fins with six spinous rays, ventral scale half the length of ventral fin ; pre-opercle strongly denticulated.

D. 19+6 ; A. 6+7 ; P. 13 ; V. 1+5 ; C. (which is injured) 14 ?

* *Crenilabrus multidentatus*. Ball's Wrasse. Three specimens of a *Crenilabrus*, taken at Youghal in the summer of 1835, have been sent me for examination by Mr. Ball. As in the instance of the last noticed, I cannot by careful research find any species described with which they agree, I, though with hesitation, bring them forward as new, under the name of *Cren. multidentatus*. The specimen from which the description has been drawn up is $2\frac{1}{2}$ inches in length. Its chief characters are,—form elongated, mouth large and powerfully armed, upper jaw the longer, pre-opercle slightly denticulated, scales of moderate size, ventral scale one-fourth the length of ventral fin ; a blackish spot behind the eye, another at the base of the last ray of the dorsal fin, and a third at the lowermost portion of the tail, branchiostegous membrane five rays.

D. 19+10 ; A. 3+8 ; P. 14 ; V. 1+5 ; C. 13, well developed.

* *Abramis Buggenhagii*. Large-scaled Bream. *Cyprinus Buggenhagii*, Bloch. Part 3, tab. 95. On inspecting the produce of a fishing-rod at the river Lagan, near Belfast, on the 6th of May, 1836, I detected a bream differing from the common species, and secured it for examination. It agreed so fully with Bloch's description of the *Cyprinus Buggenhagii* as to satisfy me of its identity, the only difference consisting in the number of rays in the pectoral fin, 12 being enumerated by him, and 18 appearing in the specimen ; several of them, however, being very short, may have escaped Bloch's notice.

The description drawn up from my specimen the day it was procured, is as follows : Length, $5\frac{1}{2}$ inches ; depth, $1\frac{1}{2}$ inch ; head one fourth of the entire length ; diameter of the eye equal to one fourth of the length of the head ; scales on the lateral line about 45, about 9 rows between it and the dorsal ridge and 5 rows below it ; under point of the caudal fin longer than the upper. Colour of the sides silvery, tinged with blue towards the back ; irides very pale yellow ; the dorsal, pectoral, ventral, and anal fins nearly transparent, or very slightly tinged with dusky, chiefly towards their extremities ; caudal fin pale yellow :

D. 11 ; P. 18 ; V. 1+9 ; A. 20 (first extremely short) ; C. 18.

This species, which is new to Britain, is stated by Bloch to be found in Swedish Pomerania, in the river Pene, and in the lakes communicating with it*.

* On my showing this specimen to Mr. Yarrell, he immediately produced from his own collection another example of this species of much larger size, measuring fourteen inches in length, which had been presented to him by a

New to Ireland.

* *Trigla Cuculus*, Bl. Red Gurnard. Of this fish two small specimens, taken at Youghal in the summer of 1835, have been submitted to my examination by Mr. Ball. In both, the second ray of the first D. fin is the longest.

Mugil Chelo, Cuv. Thick-lipped Grey Mullet. The common "mullet" of the north of Ireland is of this species, as are likewise the only two specimens that I have seen from the southern coast.

Gobius gracilis, Jenyns. Slender Goby. From the coasts of Down and Louth I have obtained two specimens of this fish. The difference in colour between them and *Gob. minutus* attracted me at first sight; but I did not examine further, until my attention was directed to them by Mr. Jenyns' description of *Gob. gracilis*, with which they in all respects agree.

* *Crenilabrus rupestris*, Selby. Jago's Goldsinny. In September, 1835, I procured two individuals of this species at Bangor, Down, where they were taken along with *Cren. tinca* and *Cren. cornubicus*.

Salmo eriox, Linn. Bull Trout. The first specimens of this trout which occurred to me were three, about 20 inches in length, that were taken with *Sal. trutta*, in the sea at Donaghadee.

* *Gadus callarias*, Linn. Dorse. Amongst fishes kindly forwarded for my inspection by Mr. Ball are specimens of the *Gad. callarias*, caught at Youghal in the autumn of 1834. On subsequently looking over some captures from Larne, county Antrim, presented without regard to species to the Belfast Museum, I also found one of these fishes.

* *Gadus minutus*, Linn. Poor. From three localities in Down and Antrim I have the *Gad. minutus*, and in the collection of Mr. Ball have recently seen two specimens from the coast of Cork.

* *Motella glauca*, Jenyns. Mackrel Midge. I include here, though unable to see any specific difference between it and *Mot. mustela*. The only Irish specimens I have seen sufficiently minute to be considered *Mot. glauca*, were brought by Mr. Ball from the South Islands of Arran.

Phycis furcatus, Flem. Common Fork-beard. To C. G. M. Skinner, Esq., of Glynn-park, I am indebted for a very fine male specimen of this fish, 25 inches in length, which was caught near Car-

friend, who caught it in the waters of Dagenham Breach, in Essex, from which place others have since been taken. This bream is at once distinguished from both the other species of British bream, by the much greater thickness of its body.

rickfergus in February, 1836. The chief characters of this species, given in the '*Règne Animal*,' and adopted in the '*Manual of the British Vertebrata*,' are, "Sa première dorsale plus relevée, et son premier rayon très élongé, les ventrales deux fois plus longue que la tête," 2nd edit., p. 335. In the first character only as here given my specimen agrees, the third ray of its first dorsal fin being considerably the longest, and the ventrals being only one fifth longer than the head.

* *Platessa pola*, Cuv. Pole. In Belfast market on the 26th of April last, I procured six individuals of this species. They were from 12 to nearly 15 inches in length, and were taken in a trawl-net near Ardglass, in the county of Down. On the 5th of May I obtained a seventh specimen from the same place.

* *Solea lingula*, Rond. Red-backed Sole. In August, 1836, three small specimens of this fish were captured by Mr. Hyndman and myself, when dredging off Dundrum, county of Down.

Anguilla latirostris, Yarr. Broad-nosed eel. Inhabits loughs Neagh and Erne, the river Shannon, &c.

Ammodytes tobianus, Bl. Wide-mouthed Sand-eel. I have from several localities on the Down coast, and from one on that of Antrim.

Syngnathus typhle, Linn. *Syng. æquoreus*, Linn. *Syng. ophidion*, Bloch. The first native specimens of these three species that I have seen were taken on the coast of Cork in 1835, and forwarded for my inspection by Mr. Ball; subsequently I have had all three from the coast of Antrim.

Hippocampus brevirostris, Cuv.? Sea-horse. In July, 1821, a recent specimen of *Hippocampus*, presumed to be this species, was found on the beach at Red-bay, county of Antrim, by William Ogilby, Esq., F.L.S.

Petromyzon planeri, Cuv. Fringed-lipped Lamprey. Specimens procured in the vicinity of Naas, county Kildare, have been presented me by Mr. Ball.

Miscellaneous notes.

Gasterosteus brachycentrus, Cuv. Short-spined Stickleback. In Minster-pool, Lichfield, I captured an immense specimen of this fish in July, 1836.

* *Labrus lineatus*, Don. *Lab. maculatus*, Bloch. *Lab. psittacus*, Risso? On September 26, 1835, I obtained at Bangor, Down, two specimens of a *Wrasse*, which agreed pretty well with the *L. lineatus* of Donovan, a species but little understood. They seemed also identical with the *L. psittacus* of Risso, used as a synonym of the *L. lineatus*

in the works of Mr. Yarrell and Mr. Jenyns; by the latter author it is marked with doubt. At the same time I could not consider these specimens else than the young of *L. maculatus*, an opinion which subsequent examination has tended to confirm, as in the same individual I have seen the lineated marking of *L. lineatus* and the spots of *L. maculatus*. The specimens alluded to as corresponding with Donovan's *L. lineatus* are small, as he describes the species to be; those conspicuously spotted over were large, and the individuals presenting partially both appearances were of an intermediate size; hence it would appear that the *L. lineatus* generally* is the young fish, and the *L. maculatus* the adult. It must be added that specimens of equal size, taken at the same time and place, vary much in colour and in the relative depth of the body. The head too is more elongated in the young than in the mature fish.

In concluding his description of the *Labri*, Pennant observes, "Besides these species we recollect seeing taken at the Giant's Causeway, in Ireland, a most beautiful kind, of a vivid green spotted with scarlet; and others at Bandooran, in the county of Sligo, of a pale green." He adds, "We were at that time inattentive to this branch of natural history, and can only say they were of a species we have never since seen." I have no hesitation in saying that the beautiful kind of a vivid green, spotted with scarlet, was the ordinary *L. maculatus*, and as little in stating my belief that the pale green kind was also the same species. On examining the produce of one rod after a day's fishing, I have seen specimens varying from the palest green to the very darkest tint of this colour.

As the three names under which this fish appears, viz., *L. lineatus*, *L. psittacus* (when it is uniformly green), and *L. maculatus*, apply to the individual rather than to the species, and thus tend to confusion, it seems to me desirable that there should be an appellation under which all the varieties could be brought, and as such I would suggest *Labrus variabilis*.

* *Crenilabrus tinca*, Risso. *Cren. cornubicus*, Risso. *Cren. gibbus*, Flem. In the autumn of 1835 an attentive examination of specimens of the *C. tinca* and *C. cornubicus*, of all sizes, and in a recent state, satisfied me of their identity. The depth of *C. tinca* in proportion to its length being found to vary considerably, though not to the extent described in the *Gibbus Wrasse* of Pennant, together with the general accordance of other characters, disposed me at the same time to believe that the *C. gibbus* is but an accidental variety of it.

* *Leuciscus Lancastriensis*, Yarr. Graining. Several very small individuals of this species occurred to me in the river Leam, near Leamington, in July, 1836.

* *Cobitis tænia*, Linn. Spined Loche. In July, 1836, when

* I have seen some specimens of the largest size entirely green, and displaying the lineation in a darker shade of this colour.

using my net for fresh-water *Mollusca*, in a drain near Guy's Cliff Warwick, a specimen of this minute fish was captured.

* *Platessa flesus*, Flem. Flounder. The specimen exhibited is from Strangford lough, Down, and presents a malformation of the head, precisely similar to that of the brill (*Pleuronectes rhombus*,) figured in Mr. Yarrell's *British Fishes*, vol. ii., p. 242.

Pleuronectes hirtus, Mull. Muller's Top-Knot. If not inconsistent with the brevity characteristic of the "Zoological Proceedings," I would remark that the fish which I exhibited at the meeting of this Society, on June 9, 1835, under the name of "*Pleuronectes punctatus*, Penn." is identical with the "*P. hirtus*, Mull." of Mr. Jenyns's 'Manual of the British Vertebrata' and the "Rhombus hirtus" of Mr. Yarrell's 'British Fishes,' a circumstance which reference to the synonyma of this species might indeed indicate, but I am induced to notice the subject on account of the specific name "*punctatus*" being applied in both works to a nearly allied species.

My specimen, critically examined when recent, exhibited the following characters, which are unnoticed in the description of *P. hirtus*, given in the above-mentioned works.

P. fin, which is quite perfect, on the upper side $9\frac{1}{2}$ lines long, and containing 6 rays, on the under side $6\frac{1}{2}$ lines long, and having 12 rays. Lateral line on the under side less strongly marked than on the upper, and considerably less curved towards its origin. A bright silver spot, two lines in diameter, at the base of the P. fin on the upper side; irides silvery, clouded with brown: they are described as sea-green by Hanmer, (Penn. Brit. Zool., vol. iii. p. 323, ed. 1812.) It is in allusion to this individual, which I had the pleasure of showing Mr. Yarrell, when in London in June, 1835, that he remarks, "I have a record of one [Rhombus hirtus] that was caught on the coast of the county of Down in Ireland." Brit. Fish. vol. ii. p. 245.

Syngnathus lumbriciformis, Jenyns? Yarrell. As it has recently been discovered that two species of *Syngnathi* have hitherto been confounded under the name of *S. Ophidion*, it should be stated, that those which I brought under the notice of this Society on June 9, 1835, as taken in Strangford lough, are identical with the *S. lumbriciformis*, as described by Mr. Yarrell, (Brit. Fish., vol. ii. p. 340.) It may be added that from Mr. Ball I have since received nine specimens which were taken by him in June, 1835, at the South Islands of Arran, off Clare, and from Captain Fayrer, R.N., several, likewise caught in the same month at Donaghadee.

The dorsal fin and vent in all these specimens, including one from Belfast bay, 19 in number, which are from under 3 to 6 inches long, about one-third of the entire length from the snout, and the head occupying about one-twelfth of the whole length. In these characters they correspond with Mr. Yarrell's description. Mr. Jenyns describes the "dorsal and vent at about the middle of the entire length," and the head "scarcely one-seventeenth" of it. Some of them exhibit ova "in hemispheric depressions, on the external sur-

face of the abdomen, anterior to the vent," as mentioned in the 'Manual of the British Vertebrata,' p. 489.

I cannot conclude without acknowledging the benefit I have received, not only on this, but on all previous occasions, when visiting London, from Mr. Yarrell's liberality, in affording me the unlimited use both of his library and of his extensive collection of British fishes.

* *Trigla pæcilopectera*, Cuv. and Val. Little Gurnard.

Amongst a number of fishes submitted to my examination by Mr. Ball, is a Gurnard, apparently of this species, which was taken at Youghal, I believe, along with sprats, (*Clupea Sprattus*), early in the summer of 1835. In form, it agrees in every character by which the *T. pæcilopectera* is said to be distinguished, (Cuv. and Val. *Hist. de Pois.*, t. iv. p. 447.) Judging from its present appearance, I have little doubt that when recent it would in colour also have corresponded. Its length is 2 inches, D. 10, (last extremely short)—15. P. 10—3, free. V. + 5. A. 15. C. 15.

Second dorsal ray longest; 25 dorsal spines; caudal fin a little forked; lateral line spinous. Thence to D. fin, and to about an equal distance below the line, rough with spinous scales; (this is not mentioned by Cuv. and Val.) lower portion of sides smooth.

With the *T. aspera*, Viviana, as described in the last-quoted work, t. iv. p. 77, and which in length is stated like the *Tri. pæcilopectera* to be about 4 inches, the present specimen agrees in many respects, but chiefly differs in the profile being less vertical, in the anterior lobes of the snout, and in the negative character of wanting "une échancrure transversale et profonde," behind the posterior orbital spine; nor with the highest power of a lens can any of the anterior dorsal spines be distinguished as "dentelée," nor the first and second rays of the D. fin as serrated, both of which characters are attributed to *T. aspera*.*

In the course of this examination specimens of *T. cuculus*, Bl., *T. lineata*, *T. hirundo*, *T. pini*, Bl., and *T. Gurnardus* were before me, *T. lyra* was not available, but the remarkable development of the anterior lobes of the snout in this species would have rendered its comparison with the specimen under consideration unnecessary.

The *T. pæcilopectera* has previously been obtained only at Dieppe, where it was discovered by M. Valenciennes.

* *Gobius Britannicus*. British Black Goby.

When at Galway-bay, on the western coast of Ireland, accompanied by Mr. Ball, in June 1834, I captured a species of Goby, whose thicker and more clumsy form at once led me to consider it different from a *G. niger* taken at Youghal, with which I had been

• Since the above was written I have had an opportunity of comparing the *Trigla* here treated of with two specimens of *T. aspera*,—one $3\frac{1}{2}$, the other $4\frac{1}{2}$ inches long, which are part of a collection of fishes, sent last year from Corfu, to the Belfast Natural History Society, by Robert Templeton, Esq., Roy. Art. This comparison served strongly to confirm every thing above stated. The *T. aspera* is admirably described by Cuv. and Val.

favoured by that gentleman. On a recent examination it proved identical with the *G. niger* of Cuvier and Valenciennes, whilst the latter corresponded with the *G. niger* of Montagu (Yarell's Brit. Fish., vol. i. p. 252.) and Jenyns. This species is considered by Cuv. and Val., but without recourse being had to a comparison of specimens, to be the same as theirs; but the two individuals under consideration, unquestionably distinct, agree so well with the detailed descriptions of those just quoted under the same name, as to leave not a doubt upon my mind as to the propriety of separating them. Amongst other differential characters, they present the following:

<i>G. niger</i> , Mont. (from Youghal.)	<i>G. niger</i> , Cuv. and Val. (from Galway.)
<i>Jaws</i> , the lower one the longer.	<i>Jaws</i> equal.
<i>Teeth</i> , several irregular rows in both jaws, those of the outer row not very much larger than the others, and, like them, straight and truncated at the summit.	<i>Teeth</i> , outer row very much the largest, and curving inwards.
<i>Sulcus</i> , extending from the head to D. fin.	<i>Sulcus</i> , wanting.
<i>Papillæ</i> * so numerous on the head as to give it the appearance of being delicately carved all over.	<i>Papilla</i> less numerous by half.
D. 6—14. P. 18. V. $\frac{1}{2}$ each. A. 12. C. 15, and some short.	D. 6—16. P. 20—21. V. 5. A. 13. C. 14.

Though of British authors, the *G. niger* of Montagu and Jenyns only is quoted with certainty; the species described as such by Pennant and Yarell appears to be the same, the exceptions being that two rows only of teeth are attributed to it by the former, and 17 rays are described by the latter as contained in its 2nd D. fin. The *G. niger* of Donovan and Fleming is the *G. Ruthensparii* (*G. bipunctatus*, Yarr.) of Euphrasen.

Bloch's *G. niger* does not agree with either species here treated of; as like Pennant's, it is stated to have but two rows of teeth. It differs, more especially from that of British authors as now restricted, in the jaws being of equal length, the teeth pointed, and having 16 rays in the 2nd D. fin; and from that of Cuv. and Val. in the shortness of the P. fin, a character represented both in his figure and description. The *G. niger* of Risso having the jaws equal, and the teeth curved, approximates it to that of Cuv. and Val., but the number of fin-rays differs considerably.

The species taken at Galway, which is new to the British catalogue, occurs also in the Mediterranean, the collection of fishes from Corfu, alluded to in the note to *Trigla pacilloptera*, as being in the

* With respect to these resembling the *G. geniporus*, as described by Cuv. and Val., t. xii. p. 32, but very different in other characters.

Belfast Museum, containing an individual in all respects, but that of size, quite identical.

Although the *G. niger* of Montagu and Jenyns accords better with the description of Linnæus—consisting only of the number of fin-rays—than the species for which Cuv. and Val. have adopted his name, yet, as several other European Gobies equally well agree with the brief characters in the ‘*Systema Naturæ*,’ and it being necessary to give one of the two which have been confounded together a new name, it appears to me that the species described as *G. niger* in the ‘*Histoire Naturelle des Poissons*’ of the last-named authors,—the greatest and most comprehensive work yet attempted on the subject—should retain the term there given it, and that it is to the *Gobius niger* of British authors that the new appellation should be applied. With this view I propose the name of *Gobius Britannicus*, not to indicate its existence only on the British shores, but in the hope that it may perhaps better than any other term mark it as the species of British authors.

As M. Valenciennes has observed that “M. Yarrell a publié une charmante figure de *notre* gobie,” (t. xii. p. 18.) it must be added that this figure is more illustrative of my *G. Britannicus* than what I have considered the *G. niger* of Cuv. and Val.; in hypercriticism all it indeed wants to be a perfect representation of that fish is—the lower jaw a little longer, and the teeth smaller, less regular and truncated.

Mr. Owen then laid before the Meeting the following observations upon the structure of the shell in the Water-clam, (*Spondylus varius*. Brod.)?

Having been led to reflect, while considering the uses of the camerated part of the shell of the *Nautilus*, upon the degree or extent to which that structure might depend upon the mode of growth of the animal and its shell, and how far it was a necessary physical consequence of the increase and change of position of the animal, independently of any special purpose served by the forsaken parts or chambers of the shell, I have paid attention to all the cases that have come under my observation of the formation of chambers in shells, by the secretion, on the part of the animal, of a nacreous layer, forming a new basis of support to the soft parts, and cutting off the deserted portion of the shell from the chamber of occupation.

It is well known that this process is not the only mode adopted to suit the shell to the changing form and bulk or other exigencies of its occupant. In the genus *Magilus* the part of the shell from which the body gradually recedes is filled up by a continuous compact secretion of calcareous matter, and a solid massive elongated shell is thus produced, which would be a great incumbrance to a locomotive mollusc, but is of no inconvenience to an univalve destined by nature to live buried in a mass of lithophytous coral.

In *Helix decollata*, again, the deserted part of the shell, after being partitioned off by the nacreous layer secreted by the posterior part of the mantle, is broken away by some yet unexplained process, and consequently no chambers nor any solid apex of the shell remains.